E UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicants

Paul J.G. Van Wulfften

Art Unit:

3672

Palthe

10/740,016

SYSTEM

Examiner:

Nicole A. Coy

Filed:

Serial No.:

December 18, 2003

Title:

RIGLESS ONE-TRIP

Docket No.

68.0382

(SHL.0295US)

Mail Stop Appeal Briefs - Patents Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

RESPONSE TO NOTICE OF NON-COMPLIANT APPEAL BRIEF

Dear Sir:

In response to the Notice of Non-Compliant Appeal Brief mailed on August 1, 2007, attached is an Amended Appeal Brief.

Date: September 4, 2007

espectfully submitted,

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Date of Deposit: <u>September 4, 2007</u>
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Janice Muno

SEP 0 6 2007 HE UNITED STATES PATENT AND TRADEMARK OFFICE

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AMENDED APPEAL BRIEF

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Janice Mund

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REAL PARTY IN INTEREST

The real party in interest is Schlumberger Technologies Corporation, the assignee of the present application.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

The application was originally filed with claims 1-35. Claims 19-28 have been cancelled; and claim 35 has been allowed. Claims 1-18 and 29-34 have been finally rejected and are the subject of this appeal.

STATUS OF AMENDMENTS

There are no unentered amendments.

SUMMARY OF CLAIMED SUBJECT MATTER

At this point, no issue has been raised that would suggest that the words in the claims have any meaning other than their ordinary meanings. Nothing in this section should be taken as an indication that any claim term has a meaning other than its ordinary meaning.

The one-trip system of independent claim 1 includes a unit that is adapted to be run downhole into a well in a single trip. The unit includes a tubing hanger; a production tubing that is adapted to receive a continuous medium riglessly deployed from the earth's surface; a perforating gun assembly coupled to the production tubing; and a screen assembly, which is adapted to be engaged by the continuous medium to cause the release and movement of the screen assembly relative to the production tubing.

In a particular embodiment of the invention, the specification discloses a one-trip system 10 that includes a unit (an upper completion 12 and a lower completion 14) that is adapted to be run downhole into a well in a single trip. The upper completion 12 and the lower completion 14 are depicted in Fig. 1 and described in paragraph nos. [0011] and [0017] of the specification. The unit (upper completion 12 and lower completion 14) includes a tubing hanger 42; a production tubing 44 that is adapted to receive a continuous medium (a coiled tubing 58) that is riglessly deployed from the earth's surface; a perforating gun assembly (a perforating gun 28) coupled to the production tubing 44; and a screen assembly (a screen 32), which is adapted to be engaged by the continuous medium (the coiled tubing 58) to cause the release and movement of the screen assembly (the screen 32) relative to the production tubing 44. The tubing hanger 42 is depicted in Fig. 1, and the specification discloses, in a particular embodiment of the invention, the tubing hanger 42 as being part of the upper completion 12. Specification, par. no. [0018]. The production tubing 44, depicted in Fig. 1, is described in a particular embodiment as being part of the upper completion 12 and as being hung from the tubing hanger 42. Specification, par. no. [0018]. The specification describes the continuous medium as being coiled tubing 58, wireline or a slickline. Specification, par. no. [0019]. In Fig. 1, the specification depicts the perforating gun 28 (the perforating gun assembly), which may be a conventional perforating gun or tubing conveyed perforator, as examples, as set forth in par. no. [0016] of the specification. The sand screen 32 (the sand screen assembly) is depicted in Fig. 1 and is described in par. no. [0014] of the specification. The figures and text of the specification describe the coiled tubing 58 (the continuous medium) as being run into the production tubing 44 to engage the sand screen 32 (the sand screen assembly). Fig. 2F and Specification, par. no. [0021]. The specification describes that the engagement of the sand screen 32 (the sand screen assembly) by the coiled tubing 58 (the continuous medium) causes the release of a lock 34 to displace the sand screen 32 from a nipple 16 to allow the release and movement of the screen 32 relative to the production tubing 44. Specification, par. no. [0021].

The method of independent claim 29 includes providing a one-trip completion system, which includes at least one perforating gun and a production tubing. The method includes running the one-trip completion system into the well in a single trip using a rig. The rig is removed, and after removal of the rig, a continuous medium is run downhole into the one-trip completion system. The one-trip completion system is actuated and operated using the continuous medium.

In a particular embodiment of the invention, the specification describes providing a onetrip completion system 10, which includes a unit (an upper completion 12 and a lower completion 14) that is adapted to be run downhole into a well in a single trip. The upper completion 12 and the lower completion 14 are depicted in Fig. 1 and are described in paragraph nos. [0011] and [0017] of the specification. The unit disclosed in the specification includes a perforating gun 28 (said at least perforating gun), which is depicted in Fig. 1 and is described in par. no. [0016] of the specification. The production tubing 44, depicted in Fig. 1, is described in a particular embodiment as being part of the upper completion 12 and as being hung from a tubing hanger 42. Specification, par. no. [0018]. The specification describes that after the onetrip system 10 is run into the well, the rig can be removed from the well site. Specification, par. no. [0019]. The specification describes that after the removal of the rig, a continuous medium (a coiled tubing 52) is run downhole into the one-trip completion system 10 and used to actuate and operate the one-trip completion system 10 using the continuous medium. More specifically, the specification describes the engagement of the sand screen 32 by the coiled tubing 58 to cause the release of a lock 34 to displace the sand screen 32 from a nipple 16 for purposes of allowing release and movement of the screen 32 relative to the production tubing 44. Specification, par. no. [0021.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- A. Can Claim 1 Be Anticipated under 35 U.S.C. § 102(b) by King (U.S. Patent No. 5,329,998) When King Fails to Disclose All of the Limitations of Claim 1?
- B. Can Claims 29-34 Be Rendered Obvious under 35 U.S.C. § 103(a) as Being Unpatentable over Lund (U.S. Patent No. 6,675,893) When Lund Fails to Teach or Suggest All Limitations of Claim 29?

ARGUMENT

A. Can Claim 1 Be Anticipated under 35 U.S.C. § 102(b) by King (U.S. Patent No. 5,329,998) When King Fails to Disclose All of the Limitations of Claim 1?

The one-trip system of independent claim 1 includes a unit that is adapted to be run downhole into a well in a single trip. The unit includes a tubing hanger, a production tubing, a perforating gun assembly and a screen assembly. The tubing hanger is adapted to be mounted to one of the well and a well casing near the earth's surface. The production tubing is sealingly attached to the tubing hanger and is adapted to receive a continuous medium, which is riglessly deployed from the earth's surface. The perforating gun assembly is coupled to the production tubing; and the screen assembly is adapted to be engaged by the continuous medium to cause the release and movement of the screen assembly relative to the production tubing.

In the Final Office Action of December 1, 2006, independent claim 1 was rejected under 35 U.S.C. § 102(b) in view of U.S. Patent No. 5,329,998 (hereinafter called "King"). King, in general, discloses a combination perforating/gravel packing tool 10, which is depicted, for example, in Figs. 2A, 2B and 2C of King. In general, the tool 10 is "an assembly of various perforating, gravel packing and production components which are interconnected by a string of tubular flow conductors 38." King, 6:46-49. This string 38 includes "one or more sand screens 24." King, 5, 8-11. King describes deploying an inner service flow conductor 40 inside the string 38. See, for example, King, 6:49-51. King also describes after the firing the perforating guns, moving the entire assembly 10 downhole for purposes of placing the sand screen 24 across casing perforations 82, as depicted in Fig. 4C. King, 9:9-12.

In the § 102 rejection of claim 1, the Examiner labels the inner service flow conductor 40 of King as the alleged production tubing of claim 1. Final Office Action, 2. However, given this labeling, there is no discussion or suggestion in King of a continuous medium that is run inside the inner service flow conductor 40. Thus, for at least this reason, King fails to anticipate claim 1, as there is no teaching or even a suggestion in King of a continuous medium that is run inside a production tubing for purposes of moving and engaging any of the sand screens 24.

It is noted that the sand screens 24 of King are an integral part of a flow conductor service string 38 (see, for example, King, 7:62-68 and 8:1-2). King fails to disclose engaging any of the sand screens 24 by a continuous medium that is received by the inner service flow

conductor 40 (i.e., the alleged production tubing) or also fails to teach or even suggest engaging any of the sand screens 24 via a continuous medium that is deployed inside the flow conductor service string 38. King also fails to teach engaging any of the sand screens 24 with a continuous medium such that the continuous medium (regardless of how the medium is run downhole) causes the release and movement of the screen 24 relative to a production tubing. It is illogical that any of the sand screens 24 may be released and moved relative to a production tubing that is run downhole with the sand screens 24 when King shows and describes the sand screens 24 as being part and thus, fixed to the flow conductor service string 38 (which, for purposes of argument, may be assumed to be the production tubing instead of the inner service flow conductor 40, as there is no teaching or suggestion in King that a continuous medium is deployed inside the inner surface flow conductor 40).

To summarize, although King discloses a string that includes a sand screen, there is no teaching or even a suggestion in King regarding a screen assembly that is adapted to be engaged by a continuous medium that is received by a production tubing that is run downhole with the sand screen; and likewise, there is no teaching or even a suggestion in King of a screen assembly that is adapted to be engaged and released by the continuous medium, such that the screen assembly moves with respect to the production tubing. Therefore, for at least any of these reasons, King fails to anticipate independent claim 1.

Claims 2 and 4 overcome the § 102(b) rejections for at least the same reason as claim 1.

Thus, for at least the foregoing reasons, the § 102 rejections of claim 1, 2 and 4 are in error and should be reversed.

B. Can Claims 29-34 Be Rendered Obvious under 35 U.S.C. § 103(a) as Being Unpatentable over Lund (U.S. Patent No. 6,675,893) When Lund Fails to Teach or Suggest All Limitations of Claim 29?

In the Final Office Action of December 1, 2006, claims 29-34 were rejected under 35 U.S.C. § 103(a) in view of U.S. Patent No. 6,675,893 (hereinafter called "Lund").

The method of claim 29 includes providing a one-trip completion system, which includes at least a perforating gun and a production tubing. The method includes running the one-trip completion system into the well in a single trip using a rig; removing the rig; and after removal of the rig, running a continuous medium downhole into the one-trip completion system. Claim

29 recites that the one-trip completion system is actuated and operated using the continuous medium.

Lund generally discloses systems in which a perforating and packing assembly 20 is first fixed relative to a casing 16 and thereafter, a production tubing is run into the well. For example, in one embodiment, Lund discloses that after the securement of a perforating and packing assembly 20 to the casing, a rig may be used to run a string of production tubing into the casing 16. See, for example, Lund, 6:19-23. In another embodiment, Lund describes securing a perforating and packing assembly 208 in a cased well 200 (see Fig. 7). After the assembly 208 has been secured to the well 200, a string of production tubing 312 is lowered into the cased well 200. See, for example, Lund, 8:19-25.

Lund fails to teach or suggest running a one-trip completion system into a well in a single trip, where the one-trip completion system includes at least a perforating gun and a production tubing. Instead, Lund clearly discloses running a production tubing string into a well *after* a perforating and packing assembly has been secured to the well (*emphasis added*). *See, for example,* the embodiments referenced above in Lund, 6:19-23 and 18-23. Therefore, for at least this reason, a *prima facie* case of obviousness has not been set forth for claim 29, as Lund, the only reference applied in the § 103 rejection, teaches away from the claimed invention.

The Examiner states in the Final Office Action, "Lund does disclose that one-trip completion systems with production tubing and perforating guns are known in the art." Final Office Action, 11. However, not only does Lund fail to teach or suggest providing the claimed one-trip completion system, Lund fails to teach or suggest the operations that are performed with the claimed one-trip completion system, such as the acts of 1.) running the claimed one-trip completion system in a well and 2.) activating and operating such a one-trip completion system using a continuous medium that is run downhole into the one-trip completion system after the removal of a rig.

Therefore, not only does Lund fail to teach or suggest the act of providing the claimed one-trip completion system, Lund fails to contain the requisite suggestion or motivation to incorporate such a one-trip system (assuming it does exist, for purposes of argument) into its system; and likewise, Lund fails to teach or suggest performing the additional acts that are recited in claim 29 with such a one-trip completion system.

Thus, the Examiner merely concludes a case of obviousness by relying on the general knowledge of skill in the art for 1.) the missing claim limitations; and 2.) the purported suggestion or motivation to modify Lund to derive the missing claim limitations. Rarely, however, can the general level of skill in the art be relied on to support a case of obviousness. *Al-Site Corp. v. VSI Int'l, Inc.*, 50 USPQ2d 1161, 1171 (Fed. Cir. 1999). In *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988), the Federal Circuit held that the Examiner had failed to establish a *prima facie* case of obviousness for not showing where the prior art taught or suggested all claim limitations. A *prima facie* case of obviousness requires objective evidence, not mere speculation or conjecture by the Examiner. *In re Lee*, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

For at least the foregoing reasons, a *prima facie* case of obviousness has not been set forth for independent claim 29 or for claims 30-24, which depend therefrom.

Thus, in view of the foregoing, the § 103 rejections of claims 29-34 are in error and should be reversed.

Date: September 4, 2007

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CLAIMS APPENDIX

1. A one-trip system for use in a subterranean well comprising:

a unit adapted to be run downhole into the well in a single trip, the unit comprising:

a tubing hanger adapted to be mounted to one of the well and a well casing near the earth's surface;

a production tubing sealingly attached to the tubing hanger and adapted to receive a continuous medium riglessly deployed from the earth's surface;

a perforating gun assembly coupled to the production tubing; and

a screen assembly adapted to be engaged by the continuous medium to cause the release and movement of the screen assembly relative to the production tubing.

- 2. The one-trip system of claim 1, further comprising a packer attached to a lower end of the production tubing.
- 3. The one-trip system of claim 2 further comprising a valve located near the earth's surface and mounted above the tubing hanger to control flow of well fluids.
 - 4. The one-trip system of claim 2, further comprising: a surface-controlled subsurface safety valve located in-line with the production tubing.
 - 5. The one-trip system of claim 2, further comprising: an artificial lift device to assist in the production of well fluids.
- 6. The one-trip system of claim 5, wherein the artificial lift device comprises a gas lift mandrel or an electric submersible pump.
- 7. The one-trip system of claim 2, further comprising:
 an upper sliding sleeve valve mounted in-line with the production tubing above the packer.

- 8. The one-trip system of claim 2, further comprising an extension having an intermediate sliding sleeve valve mounted below the packer.
 - 9. The one-trip system of claim 1, further comprising:
 - a selective nipple;
 - a shroud attached to the selective nipple;
- an inner string releasably mounted within an interior of the system; and a no-go nipple mounted to the shroud, wherein
 - a perforating assembly is mounted below the no-go nipple.
- 10. The one-trip system of claim 9, wherein the perforating assembly includes a perforating gun.
- 11. The one-trip system of claim 9, wherein the perforating assembly includes a firing head.
- 12. The one-trip system of claim 9, wherein the perforating assembly includes a safety spacer.
- 13. The one-trip system of claim 9, further comprising a lock to keep the inner string secured to the selective nipple.
- 14. The one-trip system of claim 9, wherein the inner string comprises a sand exclusion device.
- 15. The one-trip system of claim 14, wherein the sand exclusion device comprises a sand screen.
- 16. The one-trip system of claim 14, wherein the sand exclusion device comprises an expandable element.

- 17. The one-trip system of claim 9, wherein the inner string is adapted to be moved from a first configuration of being mounted to the selective nipple to a second configuration in which it is mounted to the no-go nipple.
- 18. The one-trip system of claim 9, wherein the inner string comprises a lower sliding sleeve valve.
- 29. A method to complete a subterranean well in one trip comprising:
 providing a one-trip completion system including at least a perforating gun and a
 production tubing;

running the one-trip completion system into the well in a single trip using a rig; removing the rig;

after the removal of the rig, running a continuous medium downhole into the one-trip completion system; and

actuating and operating the one-trip completion system using the continuous medium.

- 30. The method of claim 29, wherein the continuous medium comprises coiled tubing.
- 31. The method of claim 29, wherein the actuating and operating includes performing a gravel pack operation.
- 32. The method of claim 29, wherein the actuating and operating includes performing a fracturing operation.
- 33. The method of claim 29, wherein the actuating and operating includes performing a perforating operation.
- 34. The method of claim 29, wherein the actuating and operating includes moving a sand exclusion device to a position adjacent perforations in a well casing.

35. A method to complete a well in one trip comprising:

placing a one-trip completion system in a desired location in the well using a rig, the one-trip completion system having a perforating gun, a sand screen, and production tubing; removing the rig;

firing the perforating gun to create perforations in a subsurface formation; after removal of the rig, running a continuous medium downhole to engage the sand screen and move the sand screen to a position adjacent the perforations;

pumping gravel outside of and around the sand screen; and producing fluids from the well through the production tubing.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.